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New Statues in New York.

NO one doubts that a fine piece of sculpture greatly ornaments an urban park, square or street, and benefits the public by giving pleasure and by increasing the desire and appreciation for art in general; and if it commemorates a citizen who deserved well of the Republic, it may play a potent part in stimulating patriotism and all right ambitions. Unfortunately, however, it is not as yet generally recognized that the value of a statue as an educational influence in historical, biographical and patriotic, no less than in artistic, directions, depends altogether upon its right to be called fine—upon its excellence, its interest and its charm as a work of art.

We have heard it said: "This is to be merely a portrait-statue; therefore the main thing is to get a good likeness; it matters much less whether or not it is remarkably good as a work of art." But these are not intelligent words. Individuality of conception and skill in execution are, not less, but more, important in works of portraiture intended for the public's gaze than even in so-called idealistic works. In the latter the artist is sure to have had the wish to produce a beautiful result, for otherwise there would have been no reason why he should attempt his task at all; and even if he fails to conquer all difficulties, yet there will probably be something in his work that will please us if only by contrast with the monotonous aspect of the inartistically clothed people whom we meet daily in the flesh. But when a sculptor must reproduce one of these same people, his model, in the majority of cases, will lack all beauty except of that intellectual or spiritual sort which must exist in the facial expression of a man who has worthily risen to public eminence. Only the sympathetic eye of a really intelligent artist can see this sort of beauty, and only his skillful hand can translate it into artistic beauty; and then, as regards the remainder of the form, high artistic power is needed if the aspect of the average sedentary modern man and his ugly clothes is not to prove actually distressing to the eye when done in bronze. Imagination and technical skill are both needed for the production of really fine works of art of any kind; but, we are tempted to say, they are more needed in the case of a portrait-statue of a modern man than in any other task which could present itself.

If these facts were better understood by our municipalities and our generous fellow-citizens, our cities would hear of proposed new statues with constant pleasure, whereas now a feeling of dread is always excited until the name of an artist of recognized eminence is pronounced, or until the actual work has been seen; and in a very large proportion of cases this dread is more than justified by the outcome. For example, five new statues have recently been set up in the parks and squares of New York: the Columbus, designed by a Spaniard, in Central Park; the Roscoe Conkling in Madison Square, the Greeley at the junction of Sixth Avenue and Broadway, the Ericsson in Battery Park, and the Nathan Hale in City Hall Park; and among these the last-named is the only one which can be called worthy of its cost and its place, either as giving pleasure to the eye, or as likely to inspire imitative ambitions and patriotic thoughts in the minds of our fellow-citizens.

As regards the latter point we speak, not from theory, but from actual observation and from records of significant facts. Some readers may admire the four statues which do not seem to us good, and may therefore say that they are worthy of their place as pleasing some eyes. But, let them take pains to notice how the general public is affected by them, and then compare the effect upon it of Mr. McMonnies' Nathan Hale, and they will be forced to recognize that, if the greatest good of the greatest number is to be sought in the erection of public memorials, only the Hale is making its right to existence plain. No other statue in New York, scarcely excepting the Farragut on Madison Square, has ever attracted so much popular notice as this picturesque, noble, interesting figure; and no other except the Farragut is entitled to be classed with it as a remarkably fine work of art.

The general public is, indeed, ignorant with regard to all the canons and technicalities of art criticism, and can give no reasons why it prefers one thing to another. But in these cases it has utterly disproved the beliefs of those who say that the best art is therefore wasted on it—that, if it cares for a statue at all, it cares for it merely as it might care for a photograph explaining how a great man's features differed from those of his fellows. The lesson our public has thus taught those who think that less than the best in art will please it, or that the best itself will not be appreciated, is all the more convincing because Nathan Hale was not a personage in whom, before it saw his statue, it took any interest at all. A year ago, we may safely say, Hale's name was probably unknown to our school children, or but vaguely remembered by them among the many minor names they had read in their American histories; and many of our most intelligent and well-educated citizens would have been puzzled to say just what his record was, and how he met his death, or why, or where. But now a little biography of Hale has been prepared for use in our public schools; the details of his execution have been discussed for months in the columns of our newspapers; every New Yorker has become familiar with his name and his titles to fame; and, thanks to the example of New York, the place where he was captured—Huntington, Long Island—is erecting a memorial in his honor. And all this has been brought about simply and solely by Mr. McMonnies' figure, and because it is an impressive, an interesting and a beautiful work of art. There is no hour of any day when people, often of the lowest classes, may not be seen gazing at this statue; and the charm it has for them has been reflected through the mental atmosphere of the whole city.

Thus a citizen who deserved well of the Republic has, at once and for always, been assured his meed of popular recognition and admiration, and the education in patriotism of our citizens has been definitely advanced, while their eyes have been gratified and their taste for art has been stimulated. There is no citizen so dull but that he will perceive the difference between this statue and one lacking its good qualities. He may not be able to explain it further than to say, or to feel, that the one interests him

and the other does not. But he will always understand that some statues may please and interest him, whereas had he seen only poor works, he would have remained forever indifferent to the claims of art, and skeptical as to its possibilities of affording him pleasure. Among the thousands of men and boys who feel genuine pleasure every time they pass the Nathan Hale statue are many who, in future years, as private individuals or members of corporations, societies or civic councils, will have the power to influence the aspect of New York. Who can doubt that the lesson it has taught them with regard to the pleasure-giving power of works of art will then be remembered, and to our city's profit?

But there appear no such signs of popular admiration if one watches the other new statues we have named; and no signs of their having touched the imagination or the historic curiosity of our people if one studies the newspapers or other indications of the trend of popular thought. Yet Horace Greeley was a man in whom New York took great interest while he lived, and Ericsson's services to our country were not merely solid and serious, but picturesque enough in their manifestations to appeal to the imagination and the patriotism of our native and adopted citizens. Had the latter, at all events, been as artistically and forcibly presented to the public gaze as is the case with Nathan Hale, then we could rightly have looked for some patent manifestation of public interest in his personality and deeds. But his statue is a poor work of art, and therefore it does not attract the popular eye or touch the popular heart. It is as inefficient in historically educating the people and in really glorifying, spreading and preserving Ericsson's memory, as it is in delighting the eye and increasing appreciation for art in general. From every point of view the money paid for it has been wasted. Indeed, it has been worse than wasted, for if a statue or any other memorial does not advance the cause of true art, it must retard it.

The lesson which, above all, we wish to enforce is that no public monument has an excuse for existence unless it is primarily and essentially a work of art. The subject may be worthy, the purpose of its erection may be commendable, but it will miserably fail to come up to the measure of its highest usefulness unless it makes a commanding appeal to the imagination of the beholder, and through this to his nobler passions. A thousand monuments have been erected all over the country to celebrate the heroism of our soldiers during the civil war. How many of them set forth with any living force the elevated patriotism which they aim to illustrate and typify? They fail because they are not instinct with the poetry which idealizes every genuine work of art. They move no one; they inspire no one. Instead of adequately commemorating the patriotic ardor of a past generation, they simply testify that the generation which erected them lacked all proper appreciation of art and its highest functions.

Wild Roses about Chicago.

THE species of Rose in the Lake region are not in all respects clearly defined. They intermingle to some extent, and cases occur which may be designated by one name about as well as by another. This may show that too many species have been made, or that some should have varietal rank, yet the troublesome forms may be confined to particular or limited localities, or, if existing elsewhere, may be between a different set of species. The various kinds should be closely studied in the field and garden, where their behavior can be watched. This will be helpful in establishing characteristics and removing discrepancies which may have come from too implicit reliance on herbarium specimens. In the following notes the nomenclature followed is that of the sixth edition of *Gray's Manual.*

The Roses differ from one another in their time of flowering and the duration of their floral season. All species occurring in the northern parts of Illinois and Indiana will be found in bloom in June, with the possible exception of the Prairie or Climbing Rose, whose season is the month of July, as far as I have seen it. The first to appear are Rosa blanda and R. Engelmanni. In an early season a few flowers of these may be seen in May, but they are not abundant till June, and are mostly gone before the middle of July, only occasional flowers being found afterward. This year they started earlier than usual, and were so hastened by the warm weather that few were found as late as the 1st of July. R. humilis comes into flower two or three weeks later, and is generally abundant the first half of July. Each of the three species just named has a season lasting about six weeks. R. setigera, the Climbing Rose, barely continues four weeks. R. Carolina, the Swamp Rose, flowers through the summer, from the last of June till September, but is most common in July. Another form of Rose with somewhat doubtful affinities which I find here has about the same period as the Swamp Rose. It seems nearest to R. Arkansana, Porter.

The most common species is Rosa blanda found throughout this region in dry or dryish ground, both in fields and open woods. It is rarely more than three feet high, mostly but one or two feet. Taller bushes are mainly due to richer or damper soil, shade or crowding by other shrubs. The leaflets are from oval to oblong, and of a light green color. They are paler beneath, and generally more or less pubescent. The veins are impressed, and appear rather prominent beneath. The flowers are an inch and a half to two inches in diameter. They are rather pale, but are brighter when they first expand; sometimes they fade almost to white. As a rule the stems are smooth, but there are frequent exceptions, for the branches only may be smooth and the main stems prickly, or both stem and branches may be furnished with acicular prickles. The fresh shoots which spring up from the root are very apt to be prickly at first, but the prickles disappear afterward, lasting till the following year, or even longer. The receptate is smooth and globular, the calyx-leaves hispid or glandular, commonly undivided, and persistent on the pale red fruit.

Nearly allied to this is Rosa Engelmanni. The flowers are somewhat larger, from two to two and a half inches across. They are bright rose-colored when they open, but change to a pale tint, though not as quickly or to the same extent as those of R. blanda. It is a free bloomer, and frequently assumes a more simple habit than any other Rose with which it is associated here. Plants of this habit bear the flowers on short branches along the sides of the main stem, forming racemose clusters a foot or two long. These wand-like stems, with ten to twenty flowers all open at once, are very showy. It is principally a species of damp or shaded ground, growing in thickets not too dense and by the borders of swamps, but sometimes appears in drier as well as in more open situations, where it is lower and more bushy, more nearly resembling R. blanda. Its more common habitat here is in those parts of the open woods which are wet, or even covered with water in the wet seasons of the year, but where the water does not remain long enough to prevent a growth of shrubs or low trees, or where the ground is not as swampy and hummocky as that in which R. Carolina usually occurs. It is taller than R. blanda, the usual height from three to five feet, the range from two to eight feet. The main stem is almost always thickly covered with prickles. They are rather short and weak, and are sometimes so dense that the stems have a hirsute appearance, like those of some of the wild Gooseberries. The branches are generally smooth. When in full foliage the whole plant has a very vigorous look, with an ensemble which is far more easily discerned by the eye than described in words, and which soon leads in practice to its detection. The leaflets are large, being broadly oval to slightly obovate, in structure and color much like those of R. blanda, but mostly broader in proportion to their length.

The receptacle and fruit are among the best distinctions, and in critical cases may be about the only one. They are oblong to obovate. The fruit of those growing in the vicinity of Chicago is prevailingly oblong. Those I have seen from Vermillion Lake, Minnesota, had nearly always obovate fruit; though most specimens are readily distinguished from R. blanda, intermediate forms occur which are very puzzling and seem to connect the two. In this vicinity I have only met with it in the sand region at the head of Lake Michigan. It is one of the handsomest of the wild Roses, and well deserves a place in the garden.

Rosa humilis is a shrub with smooth, sleek-looking leaves, which become rather shining when they are thickish. The leaflets are usually oval, with an acute or acutish base and apex. The margin is furnished with teeth, which are apt to be coarser and more dentate in form than those of R. blanda, with which it is most likely to be confounded in some of its forms. But the foliage is generally shaded a darker green. The stems as well as branches are more or less rough, with acicular prickles. The so-called infra-stipular spines are in nearly all cases which I have noticed a pair of prickles longer and more strongly developed than others on the stems, though they themselves may be rather weak. The sepals are more or less divided or with narrow appendages along the sides. Individual flowers may not have these appendages, but they are the rule, just as their absence is the rule in R. blanda, in which they occasionally occur. The sepals are glandular hispid, but the receptacle is quite as apt to be smooth as glandular. The calyx is reflexed after flowering, and the parts soon fall away from the fruit. The stipules are rather long and are narrower than those of R. blanda. The leaf-structure is quite well defined, being finely reticulate, the thinner leaves readily transmitting light and displaying the fine network. This structure of the leaves, together with the less prominence of the principal veins, is often a good way to distinguish R. humilis from smoother-leaved forms of R. blanda. R. humilis is a low bush, six inches to two feet high, or occasionally three or more feet. It is very common in dry ground, especially of the sand-ridges of our Pine-barren region. The flowers are of about the same size as those of R. blanda, but generally of a deeper shade of rose.

Rosa Carolina is one of the best-defined species, and is nearly always easily distinguished. Sometimes it resembles taller forms of R. humilis, but the pair of rather stout and commonly hooked prickles on the stems below the insertion of the leaves, and their general absence from other parts of the stem, together with its different habit and place of growth, readily indicate the species. The leaflets are oblong to oblong-lanceolate, and are mostly longer and narrower than those of any Rose I find in this region. It is the tallest of our upright Roses, being sometimes ten feet high. As the bushes grow in clumps and are very floriferous, it is an exceedingly showy Rose when in full bloom. No other Rose forms such dense masses, frequently covering quite extensive areas of open and hummocky swamp-lands. The bushes again become very attractive in autumn and early winter with their numerous bright red or scarlet hips.

Rosa setigera, the Prairie or Climbing Rose, is the best marked of any of our wild Roses. The stems do not in any proper sense climb, but rather clamber over bushes, rocks or whatever support may be at hand. Resting on such supports the long stems may run on till they reach the lower branches of neighboring trees and crowd in among them. More frequently they are without support, except as they arch over and rest upon the ground, along which they may trail for a considerable distance. This is the common habit in open places, where the stems, arching every way from the central root, form heaps or mounds of foliage several feet across. The shoots of the year make a rapid and extensive growth, ten feet or more being not uncommon in a single season. It is our most briery Rose, the stems being very rough with strong hooked prickles. The leaflets are also larger than those of other species, and are of a lively green color. The flowers are large and bright, but with little fragrance. The Climbing Rose is rare in the region about Chicago, being mostly found in the Desplaines valley growing along the banks of the river and its affluents, or in the more open spaces of bordering woods. It is most at home in a fertile soil and in spots where it receives a fair supply of sunlight.

Another Rose of the sand region at the head of Lake Michigan has a strong resemblance to Rosa Arkansana, though not in all respects agreeing with typical forms as described or such as I have examined in herbaria. It forms a low bush ten to twenty inches high. The stems are very thickly covered with straight or curved prickles, which are rather strong. The leaflets are five to nine, oval to oblong-obovate, thickish, usually smooth and somewhat shining. The midribs beneath are sometimes provided with small prickles and glandular hairs. The narrow stipules are glandular-toothed or ciliate. It has a persistent calyx, which is glandular hispid, as also the receptacle, usually. The fruit is globular, reddish or yellowish. Though R. Arkansana is more common west of the Mississippi, it comes into the Lake region about Lake Superior, and is also found in the northern part of the southern peninsula of Michigan, and seems to re-appear at the southern extremity of Lake Michigan. It has only been detected in this vicinity in quite dry sand, attention being first called to it by its prickly stems and habit of persistent flowering till September.

Chicago, Ill. *E. J. Hill.*

Infertile Trees and Shrubs.

IT does not seem to be generally recognized that individual trees and shrubs vary greatly in fertility. Among some White Oaks in the woods we occasionally find trees that scarcely ever bear an acorn, while in the same season we find other trees loaded to profusion; and what is true of the Oak is true of other trees and shrubs. We have been frequently annoyed after planting out specimens on our grounds, in order especially to have home-grown seeds, to find the trees or bushes eventually prove infertile. Occasionally a plant is introduced into cultivation which happens to be an infertile individual, and others propagated from this naturally carry infertility with them. This has been found true with the plant known as the Sweet Shrub, Calycanthus floridus. Old plants in cultivation rarely produce seeds; in fact, I do not know that I ever saw perfect seed of this from these plants. Another species is often grown for the Calycanthus floridus, which does occasionally produce seeds. *

The Rose acacia, Robinia hispida, in cultivation, has never been known to produce perfect seed-vessels—the plants in cultivation having evidently been raised from one early introduced individual. Mr. H. P. Kelsey, of Kawana, North Carolina, tells me that there are frequently plants found wild in that vicinity that are very fertile. Occasionally this infertility has been taken as a mark of hybridity. Dr. Engelmann once found an Oak with partially entire leaves, and yet with some of the characters of the Pin Oak, which, in his monograph on American Oaks, he styles Quercus palustri-imbricaria, considering it a hybrid between two species, because of the combination of the characters of these two. He was the more led to believe in the hybridity because the tree never produced any seed; but on one occasion he found a solitary acorn. This acorn he gave to me, and the tree I raised from it has now been in bearing for several years, producing an enormous crop of acorns, in no way differing from those of the common Pin Oak.

It is well to recognize this difference in fertility in individuals where the fruiting character is particularly desired. Some additional care is required to exclude sterile trees.

Germantown, Pa. *Thomas Meehan.*

* Plants common in gardens of recent years, and fruit-bearing, are to be referred to Calycanthus lævigatus.

Foreign Correspondence.

London Letter.

Sobralia Veitchii.—This is the latest noteworthy success in Orchid hybridization achieved by Messrs. J. Veitch & Sons, who exhibited a plant of it in flower for the first time last Tuesday, when it was awarded a first-class certificate. Its parents are S. xantholeuca and S. macrantha, the latter being the mother. The habit and flowers of the hybrid are similar to those of S. macrantha, except in color, the sepals and petals being white, with the faintest flush of pink, and the lip is yellow, with a conspicuous blotch of rose-purple on the front lobe. This is the first hybrid Sobralia raised artificially. The seeds were sown in 1887, so that the plants have been seven years in growing to flowering size.

Lælio-Cattleya Zephyra.—The parents of this new Veitchian hybrid are Lælia xanthina and Cattleya Mendeli, and when shown this week for the first time it easily obtained a first-class certificate. It is not unlike C. Rex in general characters, especially in the size, form and colors of the flowers, which are medium-sized, the sepals and petals yellowish, the lip pale yellow, darker in the throat, with a blotch of crimson on the front lobe surrounded by a narrow marginal band of white.

Cattleya Hardyana.—This Orchid continues to reveal additional charm in the richness and variety of its magnificent flowers. Two very handsome named varieties were exhibited this week, and obtained certificates—Lavertinense and Tring Park—both from the collection of Lord Rothschild at Tring. The latter variety bore five enormous flowers on one scape, and was gorgeous beyond description.

Disa Kewense.—This is a beautiful hybrid, which is as easily grown as any Orchid I know, and multiplies itself by means of offsets with all the prodigality of Couch-grass. Over a hundred spikes of its bright rose-pink flowers have been on view in the cool Orchid-house at Kew for a month or more, and they are still in perfection. Many connoisseurs declare it is the best of all Disas, species or hybrid; and bearing in mind how beautiful D. grandiflora is and the grand hybrid D. Veitchii, this is saying a great deal. But D. grandiflora is not easy to grow, and therefore it lacks the quality which is so marked a feature in D. Kewense—namely, good nature under ordinary frame or cool-greenhouse treatment. D. Veitchii is a noble plant, and almost as free as D. Kewense. I would recommend all growers of Orchids to procure both and propagate them as rapidly as possible. Every little offset, if potted in sandy peat and sphagnum and placed in a cool moist house close to the roof glass, where they will be shaded from bright sunshine and always get plenty of water and air, will grow into a flowering plant in about twelve months. The Kew plants are in four-inch pots, and each bears a spike eighteen inches high with from ten to twenty flowers, each two inches across and of a rich rose-pink color, the shell-like dorsal sepal much paler and spotted all over with deep rose-red. Some of the seedlings have pale pink flowers, and the dorsal sepal is nearly white. Two other hybrid Disas in flower at Kew are D. Langleyensis, raised both by Messrs. Veitch and at Kew from D. tripetaloides and D. racemosa, with tall slender spikes of rose-purple flowers intermediate in size between its two parents; the other is D. Premier, a triple hybrid, its parents being D. Veitchii=(D. grandiflora × D. racemosa) and D. tripetaloides. It therefore combines the characters of three species. In color its flowers are almost crimson, and it is good in size and form. Another year will probably prove it to be a first-rate plant.

Stanhopea Haselowiana.—The genus Stanhopea is not a prime favorite with cultivators, although many of the species possess extraordinary beauty as well as peculiar structure of flower; probably their ephemeral character is against their popularity. They are, as a rule, easily kept in health, and they rarely fail to flower annually. Among the numerous species flowered this year at Kew, S. Haselowiana is one of the most attractive. It was described by Reichenbach forty years ago, but does not appear to have ever been a garden Orchid until a year or two ago, when it was introduced in quantity by Messrs. Linden. Its flowers are as large as the largest of Stanhopeas, and their color is creamy white, with numerous irregular ring-like blotches of lilac-purple on every part. A figure of it will be published in the *Botanical Magazine*. Those who care for Stanhopeas should not fail to secure this one.

Habenaria carnea.—A picture of this plant was published in Garden and Forest in 1891, soon after its introduction from Penang to Kew. It was imported in quantity last year and is now in all good collections. A variety called nivosa, with pure white flowers, was shown this week by Messrs. Lewis & Co., and obtained a certificate. It is not as pretty as the type, the soft rose-color of whose flowers is exceptionally pleasing.

Trichocladus grandiflorus.—This genus consists of two or three species of African trees or shrubs, and is closely related to the Witch-hazels (Hamamelis). T. grandiflorus has been introduced into cultivation by means of seeds sent to Kew from the Transvaal by Mr. E. Galpin in 1890, a plant raised from them being now in flower in the temperate house. It is ten feet high, freely branched, with alternate ovate-acuminate leaves three to five inches long, brown when young. The flowers are in short terminal clusters on the young branches; they are composed of a short brown calyx, six strap-shaped, wavy petals an inch long, white, with a crimson base and sessile stamens. According to Mr. Galpin, T. grandiflorus forms a small tree fifteen to twenty feet high in the wooded ravines of Moodies, near Barberton, where it flowers freely and is handsome, ripening its fruits in May. It is a likely little tree for subtropical regions. A figure of it will be published in the *Botanical Magazine*.

Selaginella viridangula.—A first-class certificate was awarded to a plant of this handsome Selaginella exhibited by Messrs. J. Veitch & Sons this week. Although only now certificated, this species has been in cultivation in English collections at least ten years. It is a native of Fiji, where it forms suberect stems three feet long, with fronds a foot long, clothed with small dark green leaves and elegantly tasseled. It belongs to the same set as S. Wallichii and S. canaliculata, which are characterized by an elongated stem clothed with fronds (branches) to the base. There are fine examples of it in the Kew collection.

Hæmanthus candidus.—This handsome new species is likely to become a favorite greenhouse plant, as it grows as freely as H. coccineus and has flowers quite as large and of the purest white. It differs from H. albiflos in having larger leaves, clothed with hairs on the under side and on the margin; the rachis also is distinctly hairy, and the bracts are small. The head is fully four inches across and is composed of a dense cluster of white flowers with linear segments and erect golden-tipped stamens. It is a native of the Transvaal, whence it was sent to Kew a few years ago, where it is now flowering superbly in a cool greenhouse. Mr. Bull also includes it in his catalogue of new plants for 1894. Along with it in the same house at Kew are several big examples of the bright crimson-flowered H. magnificus. There are about half a dozen species of Hæmanthus which are well worth the attention of bulb-growers in the southern states; they are the three already named, H. Katherinæ, H. carneus and H. cinnabarinus. These are all capable of outdoor cultivation wherever the scarlet Pelargonium is hardy, and they grow and flower as freely as the best-natured of bulbous plants.

Lindenia nivalis.—This white-flowered Rubiaceous shrub from Guatemala has been in cultivation about forty years. It was named in honor of Mr. John Linden, the eminent Belgian horticulturist, by whom it was first discovered and introduced. Several specimens of it are now flowering in the stove at Kew. It has linear-lanceolate fleshy green

leaves from three to six inches long and axillary flowers, which are remarkable in having a narrow pinkish tomentose tube five inches long, surmounted by a limb of five spreading petals, each an inch long, a third of an inch wide and pure white; the club-shaped green stigma stands erect above the mouth of the tube and is surrounded by five black anthers. L. nivalis is as worthy of a place among stove-flowering shrubs as are Tabernæmontanas, Gardenias and Randias.

London. *W. Watson.*

streams from southern Pennsylvania to Florida, Texas and Arkansas, and the other in central and northern China. The American Fringe-tree is one of the most beautiful of the small American trees, and no other inhabitant of our forests is more frequently cultivated or more esteemed in American and European gardens, where it has been a favorite for more than a century.

As an ornamental plant the American Fringe-tree has much to recommend it; it is possessed of a vigorous constitution, which enables it to flourish in regions of much more severe climates than that of its native home; its leaves are large, abundant and excellent in color; it is not disfigured by insects or fungal diseases, and in May and June it is covered with long drooping panicles of delicate flowers with elongated, narrow, nearly thread-like, pure white petals. It is always a charming object when in flower; and the surprising abundance of the flower-clusters is shown in our illustration on this page, which, however, fails to give an idea of the grace

Fig. 52.—The American Fringe-tree.

New or Little-known Plants.

The Fringe Trees.

CHIONANTHUS, so named in allusion to its light and graceful flowers, is a genus of small trees or shrubs of a family to which the Ash-tree belongs, from which it chiefly differs in the character of the fruit, which is a fleshy cherry-like drupe. There are only two species—one in the southern United States, where it grows near the banks of

of the panicles or the delicate beauty of the individual flower.

As an ornamental plant, Chionanthus Virginica has one serious fault. The leaves unfold so late in the season that the plants are naked and appear dead at that time of the year when other trees and shrubs are clothed in their vernal green and many of them are covered with flowers. The Fringe-tree is, therefore, difficult to group with other shrubs without injuring during the early spring months the appearance of the mass. This defect, however, great as it is, is not without compensation, for the Fringe-tree produces its flowers at a time of the year when nearly all other deciduous-leaved shrubs in our gardens have passed their flowering period.

The Chinese Fringe-tree, Chionanthus retusa, which grows in the neighborhood of Peking, and has also been found in several places in southern China and in Formosa, appears a much less desirable ornamental plant than the American species, although it possesses much scientific interest from the points of view of geographical botany and of the kinship of the eastern North American and eastern Asiatic floras.

From the American plant Chionanthus retusa is distinguished by its smaller leaves, its smaller and shorter panicles of flowers, with shorter and less conspicuous petals. It was introduced into European gardens several years ago by the Veitches, of London, who obtained it through their collector, Maries; it has been an inhabitant of the Arnold Arboretum since 1886, although it has not flowered there yet. Two years ago a specimen was planted in the park in Rochester, New York, and flowered this year at the end of May, about a week earlier than the American species in the same place opened its flowers.

Our illustration, on page 327 of this issue, is made from a branch of this plant, for which we are indebted to the courtesy of Mr. Calvin C. Laney, superintendent and engineer of the Rochester parks.

Except in its earlier flowering, Chionanthus retusa has little to recommend it as compared with the American species.

Plant Notes.

Berteroa mutabilis.—This "Hardy Sweet Alyssum" is a Levantine plant, which is more useful in wild gardens or places where it can have much space to spread, than in small gardens. It would be a good plant for large rocky spaces in public parks where a bright, but quiet, effect is desired. Grown in masses it makes an effective foreground for bold-growing plants whose lower parts require masking. It seeds too freely for small gardens, where otherwise it would not be unattractive. It forms plants about two feet or more across, somewhat less in height, and numerous low-branching stems with many side-shoots which produce terminal small clusters of white Alyssum-like flowers. The leaves are small, lance-shaped, and inconspicuous and slightly hoary. It is perfectly hardy here.

Nymphæa gracilis.—This seems to be the American representative of the Stellata group of Water-lilies. It was noted in one of the early numbers of Garden and Forest (see vol. iii., p. 415) by Mr. Pringle, in one of his inimitable letters describing the Nymphæas of Mexico. For its introduction to cultivation we are indebted to Mr. E. D. Sturtevant. It is much valued by growers, as it is day-flowering, and the white form is a fine addition to the tropical Nymphæas. The flowers vary in color from light blue to white, have sharp-pointed narrow petals, and are borne on stiff stems well above the water. The leaves are light green, dentated and large. The plant is very vigorous in growth.

Gladiolus sulfureus.—This Gladiolus is now in bloom and has flowers of striking beauty, though not brilliant. The coloring at first is a greenish yellow, changing to a very satisfactory shade of yellow of the Nankeen order. Strong plants have stems two and a half feet high, with two fairly compact rows of medium-sized flowers, of which there are eighteen to twenty on a spike. Mr. Baker describes this species as having seven to eight flowers on a very lax equilateral spike. The note was probably made from a weak growth and would describe the plant as flowered here last season. With greater vigor the spike is more pleasing and well furnished. Its habitat is said to be Mount Kilimanjaro, at an altitude of 5,000 feet. It has not been tested for hardiness, so far as we are aware. There is another Gladiolus sometimes sold and grown as G. sulfureus, but this is a light yellow form of G. tristris, a Cape species.

Tecoma grandiflora.—The wide-spreading bell-shaped flowers of this climber are just beginning to open here, and their color, which is a soft salmon-yellow without and a light orange within the tube, ranging to orange-red, with darker stripes on the outspread portion, are altogether more rich and pure than those of our native Trumpet Creeper, T. radicans. We gave a figure of this plant in vol. iii., p. 393, grown in a pot, and as it flowers when very small, and more freely, too, when forced by artificial heat, it is a good subject for forcing. Nevertheless, it never looks better than when trained up a low pillar, when it throws out its flowering branches in graceful curves. It is not so hardy as our native Trumpet Creeper, but it will survive our winters in any fairly sheltered position. When this Chinese Tecoma and our native T. radicans are planted together, the latter will commence to bloom in late June, while T. grandiflora begins in early August and continues to flower until it is checked by frost.

Clematis Virginiana.—Just now there is no plant which does so much to give a delicate beauty to shady thickets along our roadsides as the common Virgin's Bower. Its long stems support themselves wherever their petioles can find an object to twist about, but by the time they bloom they usually run over the tops of bushes in the most graceful curves, and their starry flowers in large panicles make these flowering stems objects of singular beauty. The plant is beautiful, too, in late autumn, when the ripe fruits appear in downy tufts, and yet there is something in it which refuses to be civilized. It grows well in cultivation, but somehow it never seems to adapt itself graciously to a well-ordered garden, and it never looks as well as it does in remote parts of large grounds or when running over wayside shrubberies.

Cypripedium Charlesworthii.—Mr. Watson writes that this Cypripedium is flowering in many collections in England, and so far not a single plant has disappointed its owner, every one being attractive in color and distinct. At the same time some amount of variation in the form of the flowers, particularly in the size of the dorsal sepal, as well as in color, has been revealed. Certainly it is a good garden plant, combining as it does a distinct character of flower with good nature under cultivation. It is now plentiful in English gardens.

Cultural Department.

Notes on Trees and Shrubs.

THE names huckleberry, whortleberry and hurtleberry, with qualifying or descriptive prefixes, are all often used indiscriminately for the fruits of two distinct genera of plants, Gaylussacia and Vaccinium. Locally, however, the name of Huckleberry is generally given to the former genus, while the fruits of the species of Vaccinium are commonly called blueberries, although some of the species bear black fruits, while on the other hand there are Gaylussacias which produce blue fruits. At one time they were both included under the genus Vaccinium by botanists, but good generic characters were found for separating them.

The genus Gaylussacia differs from Vaccinium in having leaves usually resinous dotted in the opening of the anthers and most especially in the structure of the fruit. While a Blueberry or Vaccinium fruit is only four or five celled (these cells being sometimes partly divided by other in-growing partitions), and contains many small seeds, the fruit of the Huckle-

berry is ten-celled and contains ten seeds, each enclosed within the hard cell walls, which thus form little sharp-edged nutlets, popularly called seeds.

One of the greatest objections generally made to the common Huckleberry, Gaylussacia resinosa, is the prevalence of the hard little seeds or nutlets in the fruit. Otherwise, this clear shining black fruit is generally found agreeable and palatable and popular in the market. The quality of the fruit varies considerably in different localities and on different individual plants, offering a great opportunity for improvement by cultivation and selection. Improvements in the direction of fewer seeds and increase in size are most to be desired and should not be difficult of attainment. On account of difference in size the seedy character of the fruits of some wild plants is much less noticeable than it is in others. Another direction tending to popularize the fruit may be found in selecting and growing the light-colored or so-called white-fruited varieties occasionally found. A specimen growing in the Arboretum has dull reddish white fruit, or purplish red on one side and pale on the other, with thin skin and a sweet, pleasant flavor. It is of good size and rather soft and juicy, so that its ten seeds are not so much noticed when the fruit is eaten. Though small, the plant is prolific, but does not seem so vigorous and fast-growing as the normal black-fruited type. In the *Bull. Torrey Bot. Club*, vol. xvi., p. 21, it is stated that in one season in Pike County, Pennsylvania, twenty bushels of wild white or cream-colored berries "were gathered and sold for almost three times the price of the ordinary kind."

The Huckleberry responds quickly in regard to size, quality and productiveness when brought under cultivation, and improved plantations of it may yet be found to pay well, although the profits may not be so great as with the Cranberry in its best seasons. The Huckleberry will grow in any ordinary garden-soil in regions where plants of this family thrive naturally, but a sandy soil with a good addition of peat will suit it best.

While this species grows naturally in both dry and moist situations, we have another closely allied species which is more restricted to damp grounds, although it will do well under drier conditions of cultivation. This is Gaylussacia

Fig. 53.—Chionanthus retusa.—See page 325.

dumosa, sometimes called the Dwarf Huckleberry, though it is no more dwarf than G. resinosa. At this season the chief difference will be noticed in the much duller black color of the fruits of G. dumosa, which are also covered with minute rusty brown glandular hairs. The berries are also produced on very leafy peduncles and are accompanied by green leaf-like bracts, and the calyx-lobes are much larger and more conspicuous. It is curious that this fruit should have been described as insipid in some of the Botanies, for to many persons it has a pleasant and agreeable flavor, although its duller color and rusty-hairy character and tougher skin are objectionable.

Of all our northern hardy species of this genus the fruit of the Huckleberry known as the Dangleberry or Blue Tangle, Gaylussacia frondosa, is considered the best-flavored and most palatable by many good judges. It is sweet and pleasant, with a slight agreeable acidity, and either fresh or cooked it is hardly surpassed by any other Huckleberry or Blueberry. The berries are of a deep blue color, covered by a rich bluish white bloom. The leaves and young twigs of the whole plant are generally pale or glaucous. The bush may often be found from three to five or six feet in height, but in this region it does not appear to be prolific, and there is some trouble in getting a large quantity of the berries. These are generally produced in a somewhat scattered manner on long slender stalks, from which habit the plant gets the name Dangleberry.

Arnold Arboretum. *J. G. Jack.*

The Vegetable-garden.

MANY crops in the vegetable-garden were injured by the dry weather of June and July. The total rainfall in this locality was only 2.05 inches, and as the rain came in heavy thunder-showers and fell on a parched surface much of it ran off into the drains instead of soaking into the ground. Peas suffered more, perhaps, than any other crop, and were literally burnt up. The later sowings now look more promising, having been helped by recent rains, but it is too late to make any further sowings on account of mildew. If the weather is not too dry, good peas can be had in September from sowings made about the middle of July. String Beans may still be planted for a late crop, and these will do well unless caught by an early frost. We find Valentine the best variety for late planting.

Early celery is now ready for use. Where the plants are set in single rows we prefer blanching with boards to earthing up. The notion that Celery thus treated is deficient in flavor to that banked with soil, is erroneous. When the plants are earthed up in hot weather, such as we have had recently, any considerable rainfall causes the hearts of the stalks to rot. By using boards this injury is obviated and the plants can be regularly supplied with water, which cannot be done when they are earthed up. Celery thus treated is crisp and sweet, whereas when earthed up and it becomes dry at the root, the growth is stopped and it is tough, stringy and bitter. In prolonged dry weather Celery requires copious waterings. A cool showery day should be selected on which to apply liquid-manure, if this is possible, and in any event the earth about the plants should be well-soaked with clean water before the liquid-manure is given. For a late crop of Celery the plants must be set out now without delay, or poor heads only will be produced. Celery is a moisture-loving plant, and should never be allowed to suffer for water. If kept growing continuously it is not likely to be troubled seriously by rust and other diseases.

Shallots are about ready to be taken out of the ground, and Onions are almost in condition to be pulled up. Onions are generally small this season, but several soakings of water during the season, applied with a sprinkler, have helped our crop, so that it is above the average of other years. After the Onions are cleared off we fertilize the ground with some chemical manure, point it over and sow Prickly Spinach.

Rutabagas and Beets may yet be sown for a late crop. We find Early Egyptian to be the most reliable Beet. A batch of Cauliflower should now be planted in well-enriched soil, and fine heads will be produced if they have the right treatment. Cabbage, Savoy Cabbage and Curled Borecole may also be planted at this time, and occasional sowings of Lettuce and Raddish seed in the open should not be neglected. This has been a trying summer for Lettuce, but better heads may now be expected.

Cucumbers growing out-of-doors should be looked over every few days and the old fruit cut off. The English variety should now be set out in frames for late crops, and a further sowing made, the plants from which can be grown on at the end of a warm house. Muskmelons should be examined occasionally and all fruit of a fair size raised to the light on a small block of wood or a flower-pot, to prevent rotting during wet weather.

Potatoes have ripened much earlier than usual on account of the dry weather. Advantage should now be taken of clear, bright days to harvest them, for heavy rainfalls would do them serious injury. Sweet-potatoes have reveled in our recent tropical weather. The vines require to be lifted from the ground each week as they root at every joint if left undisturbed. Tomatoes on trellises need trimming once a week, and plants in hills should have some of the superfluous shoots removed so the sunlight may reach the fruit. The ripe fruit should be gathered so that the later fruit may fill out and ripen.

The hoe should be used freely for all growing crops and the surface be kept well stirred. Peas, Corn and other vegetable plants should be removed to the rubbish heap as soon as they are spent. If this is done and the weeds are kept well under, the vegetable-garden will be attractive during the fall season, when it often is most disorderly.

Taunton, Mass. *W. N. Craig.*

Carentan Carrot.—I have this season made extensive trials of almost every kind of Carrot, to learn which is the best. They have been grown in a soil best suited to Carrots—that is, a free sandy loam—and the weather conditions have been favorable for perfect development. Growing modestly beside Danvers, which was rearing its rank tops, I noticed a variety with very small and delicate foliage. This is a notable feature in a Carrot, especially when needed for forcing or use in a small garden. The roots I found to be seven inches long, perfectly round, free from "rings" and rootlets, with a small stump-root. It was perfectly free from the woody core so prominent in many varieties, and remarkably tender and sweet. When I add that this variety is just as early as the French Forcing Carrot, its value will be apparent. It is amazing that vegetables comparatively rank and coarse are grown when such refined delicacies may be had with no greater outlay of labor and money. For cultivation in a private garden this Carentan Carrot I believe to be the best variety for summer use.

Bloomfield, N. J. *W. R. S.*

Correspondence.

Notes from West Virginia.

To the Editor of Garden and Forest:

Sir,—Though few shrubs are now in bloom, their dense foliage forms an attractive background for the showy flowers of many herbaceous perennials on the margins of beds. Tall Campanulas and gay-colored Phloxes grow among the lesser shrubs. The fragrant Clethras are just fading. Here and there are large clumps of the native Œnotheras, Œ. biennis, self-sown, and several handsome varieties of Asclepias, notably A. tuberosa, and a bright pink-flowered Milkweed, which are allowed to bloom at will in the wilder parts of the home-grounds. Near the house are fine groups of Day Lilies or Funkias, the white-flowered, the blue Day Lily and the variegated varieties—all now at their best.

Several species of small-flowered Clematis, now in bloom, are scrambling over dead trees and the old stone-wall that surrounds the grove, and the scarlet Trumpet Creeper, Tecoma radicans, riots over the palings and clothes the rock-brakes with a fresh mantle of green, holding up its deep red goblets as an invitation to the humming-birds.

An interesting group of blooming shrubs has for its centre a tall Aralia spinosa, just coming into flower. The feathery blossoms, in large umbelliferous panicles, give the plant an airy elegance which makes it a worthy companion to Osbeck's Sumach, Rhus semialata, which is the most graceful of its class. Its delicate cream-colored florets opened a few days before those of the Aralia, and are still in their prime.

Near by is a handsome large Chaste-tree, Vitex Agnus-castus, covered with its paniculate cymes of bright bluish purple blossoms. The leaves of this shrub are aromatic, resembling those of the Walnut, but with a more powerful fragrance. The sap of the Chaste-tree is quite poisonous, as I once found to my cost. Having a tendency to browse and nibble among my plants, I experimented with odorous twigs of the Vitex. A sore mouth was, however, the worst consequence of the task in which I indulged.

Very charming at this season are the large bright red hips of the Rugosa Roses, and I can even recommend them to the palate of the curious. They are as large as crab-apples and

pleasantly sweet, though rather insipid to the taste. These Roses still give us a few blossoms.

Rosa Wichuriana, planted last spring, bloomed profusely in June. This Rose grows and spreads rapidly without any care, and is a charming plant for wild places and rockeries, with a creeping habit, tiny varnished leaves and pretty single white flowers.

Another interesting June bloomer is Hovenia dulcis, a small tree from Asia, the fruit of which "is said to make men mad." Our Hovenia bloomed, but it did not set any fruit, so that we have no means of proving its intoxicating qualities. It is four years since it was planted. I would be glad to know whether any readers of GARDEN AND FOREST have succeeded in obtaining fruit from the Hovenia. The flowers have a perfume like that of Elder-blossoms. They are cream-colored, and borne in axillary and terminal panicles. The Hovenia thrives in a clay soil and seems to have no insect enemies.

Many Altheas are in bloom. These shrubs have cool-looking foliage, and the flowers of some of the single-flowered kinds are pretty enough. The bright pink, the white and the blush-colored single-flowered Altheas form a pretty group in one of our shrubberies, but their chief merit lies in the fact that they are August bloomers.

Shepherdstown, W. Va. *Danske Dandridge.*

A Desirable Tree.

To the Editor of GARDEN AND FOREST:

Sir,—I should like to call attention to the Kentucky Coffee-tree, Gymnocladus Canadensis, a tree which has not received the attention it deserves in the northern states. It is one of the hardiest, cleanest and most distinctive of our trees, and is never assailed by any enemy, so far as I know. Its growth is extremely rapid, and it sometimes makes six feet in a season from the seed, and more than that as a sucker-growth. The transplanted sucker, however, is less rapid in development than a seedling. The limbs have an attractive way of elbowing about that distinguishes it from all other trees. For shade, the tree has the charm of sifting and thinning the sunbeams rather than totally excluding them. The flowers, which come on about the first of July or earlier, have a spicy fragrance.

A valuable characteristic of this tree is that it leaves out late in spring. Difference in time of coming into leaf adds variety to plantations, and the Butternut, the White Ash, Magnolia acuminata, the Catalpas and the Coffee-tree are two weeks later than the Willows and Birches. The English Elm is fully two weeks later than our native Elms in putting forth its leaves.

Clinton, N. Y. *E. P. Powell.*

The Forest.

Mixed Oak and Beech Forests of the Spessart: Management by the Bavarian Government.—IV.

CONIFERS MIXED WITH THE BEECH.

IT is not, however, intended that those portions which will be left to be stocked by the Beech are to grow up as pure Beech-woods. The worst places where the woods are stunted, on shallow stony ground, or when the rock is near the surface, or when the soil has deteriorated through continuous removal of litter, have been and will hereafter, as the wood on them is cut, be transformed into Scotch Pine on dry, and Spruce on moist ground. But also into the Beech-woods on better soil, where it does not appear expedient to establish Oak areas, is it intended to introduce a mixture of coniferous woods. The object is to produce more timber within a shorter time. The timber of these coniferous trees, Larch, Scotch Pine, Spruce and the Silver Fir, invariably fetches good prices where it has grown up mixed with the Beech. In fact, it is intended to create mixed woods, not only of Beech and Oak, but also of Beech and these conifers. It has been stated above that a Beech-tree 180 years old, with a diameter of twenty-four inches, may be expected to yield 30 per cent. of timber at twenty marks and 70 per cent. of fire-wood at five marks a cubic metre. That time will suffice to produce two successive crops of coniferous trees with, in the aggregate, a much larger volume of wood, of which about 80 per cent. would be timber, worth as much if not more than Beech. Moreover, the demand for Beech-timber, which is never very considerable, may diminish, whereas the demand for coniferous woods is certain to increase.

As regards the Larch, many of the younger woods do not look promising, but, as already mentioned, there are groups of trees over 100 years old which have grown up in the midst of Beech, and which are well grown and healthy. The Silver Fir has not yet been tried to any large extent in the Spessart; there is not, however, any doubt regarding its success. In accordance with these ideas, coniferous trees are introduced into the Beech-woods in a variety of ways, blanks in the young crop are filled up by planting groups of Larch in dry, Spruce in moist places, while the Silver Fir, which demands much shelter while young and must have a start on account of the very slow rate of growth in its youth, requires different treatment. In compartments which are to be regenerated within a few years, holes are cut by the removal of old spreading trees; in these holes the ground is sown with Silver Fir which comes up under the shelter of the surrounding wood and can bide its time, until the rest of the wood is regenerated in the usual manner by means of successive cuttings.

FUTURE TREATMENT OF OAK AREAS.

At the present stage these Oak areas are exceedingly healthy, completely stocked thickets. But it is certain that when they have attained the age of from forty to fifty years their condition will be less satisfactory, the stems will show a tendency to branch, they will assume an irregular shape, and the ground will not be sufficiently shaded or sufficiently manured by the scanty leaf-fall of the Oak. At that time, therefore, Beech will have to be sown or planted to serve as an under wood to shade and manure the ground, and thus to improve the growth of the Oak. For this purpose the Oak will have to be heavily thinned, and these thinnings will have to be repeated from time to time in order to afford the light needful for the development of the Beech. Eventually it is expected that these areas will be stocked with two-storied woods, the upper story consisting of Oak and the lower of Beech, when at the age of 120 the Beech-wood is cut, a portion of the Oak-trees will be held over and these will probably run through a second rotation of the Beech. All this, of course, is hypothetical, but the hypothesis is based upon actual experience, and when plans are framed for the management of such slow-growing trees as the Oak, some idea must be formed regarding the effect which the operations prescribed in these plans will have in a far-distant future. So much, however, may be regarded as certain, that it is not expedient to allow the woods in these Oak areas to grow up as pure Oak-woods.

The question arises, whether matters might not be arranged a little differently, so as to save the underplanting with Beech and the heavy thinning of the Oak entailed by this operation. In that portion of the forest-range Lohr West, which adjoins compartment Horstig, and in compartment Schwarzbuch of the Rothenbuch range, which is situated west of Horstig, considerable areas were sown in 1861 with acorns, not broadcast, nor in lines two to three feet apart, as previously described, but in lines from six to nine feet apart. These lines had evidently been well dug up and the acorns had been sown very thick in them. The lines of Oak-saplings are dense and in excellent condition, and between these lines Beech has come up at a later date naturally, but the Oak having a sufficient start the Beech hitherto has been no hindrance, but on the contrary an advantage in shading and manuring the ground, and in making the Oak form clean and straight stems. It remains to be seen whether a distance of six to nine feet between the lines is sufficient, and whether the Beech will not after all overtop the Oak under this arrangement. Should a plan like that here indicated prove successful, the Oak areas would have to be made larger than hitherto, but the great advantage of a mixture from the commencement would be gained, and the operation of underplanting with Beech at a later period would be saved.

Bonn, Germany. *Dietrich Brandis.*

Notes.

A correspondent inquires how much land it would require to furnish strawberries enough to supply an average-sized family. We should say that such a family might have in an average year all the fresh berries needed during their season, besides a few for canning, if five or six rows of plants a hundred feet long were set out and cultivated with rather more than average care.

A wine syndicate has been incorporated in California for the purpose of maintaining the prices of grapes and putting an end to the ruinous competition which has forced the price of wine below the cost of production. The new association, which is composed of the largest wine makers in California, has secured options on four-fifths of the entire vineyard area of the state. No wine will be sent out unless it comes up to a certain standard.

The celebrated pond in Bordentown, New Jersey, where the so-called Egyptian Lotus was first naturalized, is now in its greatest beauty, and the growth is unusually fine this year. Mr. E. D. Sturtevant writes that during the last week in July a thousand flowers could be seen expanded at one time. In some instances the flower-stems rise to a height of more than eight feet, and a tall man wading in the shallow water through this miniature tropical jungle is entirely hidden from view.

In most of the eastern states this has been a trying year for new plantations on account of the protracted drought and heat, and yet, out of several thousand trees and shrubs transplanted in the Arnold Arboretum, very few have succumbed. Indeed, the plantations have rarely looked better, and Mr. Dawson attributes this success to a very careful preparation of the ground. Cultivation, to keep the surface soil loosened, has helped, but the principal factor was deep and thorough trenching beforehand. Only when ground is prepared in this way are newly planted trees and shrubs enabled to resist successfully long periods of drought.

A dispatch to the *Tribune* of this city states that a train-load of fresh California fruit will be sent to London every week until the end of the season, and that the first shipment of this year is now on the way. An experiment of this kind was made two years ago, but freight rates were so high that the venture was a losing one. But with rates reduced to present figures a fair profit ought to be realized. It is estimated by competent authorities that California has lost $1,500,000 by the railroad strike. This means not only that much fruit was lost, but that prices have been greatly depressed by the present glut in eastern markets. Since the strike as many as 108 car-loads of fruit have been shipped eastward from Sacramento in one day. The San Francisco fruit market is flooded with choice Bartlett pears and Crawford peaches, and street peddlers are selling sixteen large pears or peaches for five cents, a price which does not pay for picking and packing.

A writer in the *American Agriculturist* states that from six to eight thousand acres of land in Wayne County, New York, are devoted to the cultivation of Peppermint. The average yield is about a ton of wilted plants to the acre, and this will produce some twenty pounds of oil. The yield runs down from this to ten pounds, and even less, and has been known to go as high as forty-five pounds of oil to the acre, the price of which has varied within a few years from $1.35 to $5.25 a pound. The prices received by different growers depend largely on the freedom of the Mint from weeds, which are the great enemy to success. The habit of the Peppermint is such that its profitable cultivation is impossible upon foul land. Low, rich, mucky land is selected, and in April portions of the old plants are strewn in furrows thirty inches apart. The ground is kept clean until the plants, by tillering, take entire possession of it. After this hand-weeding must be resorted to. The land is cropped two, and sometimes three, years, but it then becomes so weedy that the oil will not be good enough to pay for harvesting. Of course, the first crop is best. The Mint ripens when about two and a half feet high, is cut with cradles in the latter part of August, raked into cocks, wilted, and then taken to the still which extracts the oil.

Students of palæontology will be interested in an article by Mr. Lester F. Ward, published in the July *Bulletin of the Torrey Botanical Club*, and entitled "Recent discoveries of Cycadean Trunks in the Potomac Formation of Maryland." In 1859 two large fossilized Cycad-trunks were discovered in the iron-ore region of Maryland, and recently Mr. Arthur Bibbins, Curator of the Museum of the Woman's College in Maryland, has found thirty-five additional ones, all good, and many of them "extraordinarily fine" specimens, some showing fully half the original trunk of the tree. This the writer regards as "one of the most important events in the history of palæontology in America, as it brings together such a body of facts relative to the Lower Cretaceous in Maryland that it will now be possible to give something like a complete history of that type of plants." The numerous and valuable specimens were not unearthed by Mr. Bibbins, but were found in the possession of rural residents of the iron-ore districts, having been discovered long ago. Their curious aspect then attracted attention, and they were preserved as curiosities, perhaps in the hope that they might prove of pecuniary value; and, therefore, in addition to the specimens that Mr. Bibbins actually obtained, there remain quite a number which are known to exist, but which for the present cannot be found.

The Duchess of Oldenburg, Holland and Twenty-ounce Pippins, and Maiden Blush have been added during the week to the list of apples now on sale here, and these bring as high a price as Nyack Pippins, $3.00 to $3.50 a barrel at retail. Maryland, Delaware and New Jersey peaches are still high and in moderate supply, the best selling for $2.50 a basket, and even more, to the retail buyer. Moore's Early and Champion grapes are now coming from as far northward as Delaware, Virginia contributing most of the supply at this time. Belle Lucrative, Flemish Beauty and Catherine pears have arrived from New Jersey and from the Hudson River district. But the main factor in the fruit-market is the enormous quantity of California fruit now arriving. Whereas sixty car-loads a week is a normal supply for this city, and eighty car-loads the limit of sales at fair prices, as many as one hundred and thirty-five car-loads were sold here last week. Nearly 40,000 boxes of Bartlett pears alone have been sold at prices that little more than pay actual shipping expenses to the grower. The fruit is of fine quality, and this is especially true of the peaches, which this year are of a flavor that compares well with eastern fruit, while the nectarines, which began to arrive last week, although small, are beautifully colored and of unusually high flavor. Canteloupes and Jenny Lind muskmelons from Maryland and Virginia sell at $2.00 and $2.25 a barrel at wholesale, while only the best grade of an uncommonly large supply of the yellow-fleshed Christina melon brings as much as $1.50 a barrel. Probably there have never been as many watermelons in this market before. Last week, after thirty-one car-loads had been unloaded on one of the railroad docks in this city and added to a large quantity already on hand, forty-eight car-loads remained standing in Jersey City awaiting room on this side. Those quoted as "prime" sell at $12 to $15 a hundred.

Under the act of Parliament which gave Covent Garden Market its charter in 1828, it was divided into eight sections, the smallest of which, containing twelve small stands, was devoted to trade in flowers and plants. In 1848 the old place had become inadequate and a separate flower-market was built. With increased facilities for trade the demand grew, and as plants and flowers were better grown and better known they were more appreciated, and the present large market was founded, and already this is filled to overflowing, so that bedding-plants for gardens and window-boxes are accommodated outside. No flower-show in the world can equal this market in the morning, either in the abundance of its material or its average excellence. The plants are of a size suitable for the purpose for which they are to be used, and they are perfect examples of good cultivation. More perfect specimens of Pelargoniums, or well-flowered Fuchsias, or finer pots of Mignonette, some of them carrying six or eight giant trusses, or Ericas of different varieties cannot be seen anywhere. The cut flowers are quite as good as the growing plants. They come not only from near-by points, but they come by the thousand from France, Italy, Holland, Belgium, Germany, the Channel Islands, Scilly Islands, and every nook and corner of Great Britain. As an indication of the amount of business done here it is stated in a recent article that a single grower often sells in one day eight hundred large baskets of double white daffodils, each basket containing a dozen bunches; while another disposes of $300 worth of violets in a morning. As an instance of the enterprise which keeps up with all attractive novelties, it is said that one grower already sells daily two hundred dozen flowers of the new variety of Carnation, Uriah Pike. Some estimate of the enormous quantity of flowers sold in this market can be made from the following figures for one morning in May last: 268 large vans were loaded with flowers; there were 114 smaller loads, besides 370 stands with every available shelf packed to overflowing, gangways blocked and the entire floor space filled.